

Nevada Operations Office News

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National Nuclear Security Administration Releases Historical Nevada Test Site Ground Motion Data to University of Nevada, Reno

Information to assist university seismological laboratory scientists with their studies of Southern Nevada earthquake activity

Thirty-seven years of seismic data tabulated from ground motion caused by the detonation of more than 300 underground nuclear tests conducted at the Nevada Test Site, from 1964 until testing ended in 1992, are now available to researchers.

The seismic records were tabulated and cataloged by John A. Blume & Associates Research Division. Blume, at that time, had the unique capability and responsibility of being the only known engineering firm in the United States to carry out measurements to assess and predict the character and magnitude of ground motion, as a result of underground nuclear tests and natural earthquakes was awarded the contract in 1964.

In September 13, 1963, the resulting ground motion from *Bilby* a 249 kiloton (249,000 tons of TNT) test was felt in the Las Vegas Valley, demonstrated the importance of monitoring the side effects of ground motion caused by underground tests at the Nevada Test Site.

David Von Seggern, seismic network manager, University of Nevada, Reno, Seismological Laboratory, said, "We became interested in gaining access to the ground motion records after the June 29, 1992, 5.5 magnitude *Little Skull Mountain* earthquake that occurred in the southwest corner of the Nevada Test Site."

"The Blume records will help us with our studies into ground motion, especially in Southern

Nevada, which has several fault zones in the Las Vegas Valley," said Von Seggern.

According to Von Seggern, the State of Nevada is located in "earthquake country." It is one of the most seismically active regions in the united States. Behind California and Alaska, Nevada ranks third in the states subject to large earthquakes that have occurred over the last 150 years. This fact is supported by the 75,794 seismic events (as of April 24) that have been documented in Nevada by UNR.

Although UNR was the principal requestor for the ground motion study records, NNSA will make the records available to other researchers who make a formal written request to: National Nuclear Security Agency, Nevada Operations Office, Office of Public Affairs and Information, P.O. Box 98518, Las Vegas, NV 89193-8518.